

Application No. 10/582,355  
Art Unit: 3739

Amendment under 37 C.F.R. §1.111  
Attorney Docket No. 062648

**AMENDMENTS TO THE DRAWINGS**

The attached replacement sheet of the drawing includes changes to Fig. 22. Applicants have included the legend “Prior Art.”

**REMARKS**

Claims 1-5, 7-9, 11-16, 18-20 and 22-24 are pending. Claims 6, 17 and 21 are cancelled herein without prejudice or disclaimer. Claims 1-3, 7-9, 12-14, 18-20, 23 and 24 are amended herein. Support for the amendments is detailed below.

**Applicants' Response to the Objection to the Drawings**

**Figure 22 is objected to on the basis that it should be designated by a legend such as  
--Prior Art-- because only that which is old is illustrated.**

Applicants have amendment Figure 22 herein accordingly.

**Applicants' Response to the Objection to the Specification**

**The disclosure is objected to because of an informality on pg. 2, ln. 35 of the specification which refers to "Non-Patent Reference 1."**

Specifically, the Objection maintains that this is improper because it is unclear as to which reference this is referring. Applicants have amended the specification at page 2, lines 8-18 to clarify that "Non-Patent Reference 1" is "Development of a Microfine Active Bending Catheter equipped with MIF Tactile sensors" by Hironobu Takizawa, and four co-authors, IEEE International MEMS' 99 Conference, January 17, 1999.

**Applicants' Response to the Objection to the Claims**

**Claims 1-3, 7-13 and 18-24 are objected to because of the following informalities:**

**Claim 2 recites "and said tip is comprises" in ln. 2, which should be changed to -and said tip comprises--.**

Applicants have amended claim 2 accordingly.

**Claim 3 recites "covers inflatable" in 11. 2-3, and is suggested to be changed to --inflatably covers--.**

Applicants have amended claim 3 accordingly.

**Claim 14 recites "covers inflatable" in 11. 2-3, and is suggested to be changed to --inflatably covers--.**

Applicants have amended claim 14 accordingly.

**Claims 1, 2, 7-13 and 18-23 contain the acronyms "SMA and "LED". These should be replaced by their respective full phrases so there is no ambiguity or possible misinterpretation of what the acronyms stand for.**

In response thereto, applicants respectfully submit that the use of the acronyms is proper and allowable under U.S. law so long as the skilled artisan readily ascertains the metes and bounds thereof. In the current circumstance, a skilled artisan readily ascertains that a SMA is a Shape Memory Alloy. See also paragraph [0005] of the application. Further, applicants respectfully submit that the term LED is well known within the art to refer to Light Emitting Diode. As such, a skilled artisan reviewing the claims will have no difficulty determining the metes and bounds thereof. Wherefore, favourable reconsideration is respectfully requested.

**Claims 7, 8, 12, 19, 23 and 24 have preambles in which they are dependent on unelected claims. These dependencies are no longer valid, and should be removed.**

Applicants have amended the claims accordingly.

**Applicants' Response to the Claim Rejections under 35 U.S.C. §112**

**Claims 8-11 and 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**Claim 8 recites the limitation "each small diameter hole" in ln. 8. According to the rejection, there is insufficient antecedent basis for this limitation in the claim.**

Applicants have amended claim 8 accordingly.

**Claim 10 recites the limitations "the behind link" in ln. 2 and "the front link" in ln. 3. According to the rejection, there is insufficient antecedent basis for these limitations in the claim.**

Applicants have amended claim 10 accordingly.

**Claim 19 recites the limitation "each small diameter hole" in ln. 9. According to the rejection, there is insufficient antecedent basis for this limitation in the claim.**

Applicants have amended claim 19 accordingly.

**Claim 21 recites the limitations "the behind link" and "the front link" in In. 3. According to the rejection, there is insufficient antecedent basis for these limitations in the claim.**

Applicants have cancelled claim 21 herein. Wherefore, applicants respectfully submit that the rejection is now moot.

**Applicants' Response to the Claim Rejections under 35 U.S.C. §102(b)**

**Claims 1, 2, 4, 5, 7-13, 15, 16 and 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Takehana et al. (US 4930494) (hereinafter, referred to as Takehana).**

In response thereto, applicants respectfully submit that the present invention as now claimed is not anticipated by Takehana for at least the reason that the reference does not provide for all the features as claimed.

Specifically, Takehana at least fails to provide for the features of the weights and working channel tube as set forth in parent claims 1, 2 and 13.

Claims 1, 2 and 13 as now presented include, among other things, the following two elements: (1) working channel tube and (2) one or more circular weights.

In regard to the rejection of the parent claims 1, 2 and 13, the Office Action cites primarily to the disclosure of Fig. 59 of Takehana. The above elements of claims 1, 2 and 13 are provided for by the rejection as being disclosed in Takehana as: (1) protecting tube 234 and knurls 251 (see Fig. 63).

Under U.S. patent law, in order for a claim to be anticipated, each and every feature must be provided for in the single cited reference. "[U]nless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior

invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. 5 102." *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008).

First, applicants respectfully submit that Takehana does not disclose a "working channel tube" as set forth in parent claims 1, 2 and 13. Specifically, the protecting tube 234 of Takehana cited by the Office does not correspond to the working channel tube as set forth in applicants' claims. As described in the claims, the "working channel tube" of the present invention is a working channel. However, Takehana discloses "Bias Spring 235, covered by protecting tube 234." See column 22, lines 17 to 19. Hence, the "protecting tube 234" is completely different from a working channel tube.

The invention of Takehana [Fig. 59] uses a "Bias Spring 235." As such, in Takehana, a large amount of heat may be generated at SMA to bend a tip against "Bias Spring 235. Accordingly, Takehana must have a cooling mechanism, which causes an apparatus to be complicated and large-sized. On the contrary, since the present invention that does not include a bias means, the present invention does not need a cooling mechanism and can bend a tube by SMA with no adverse effects on the human body. Hence, Takehana does not disclose an equivalent to the working channel layer as claimed.

Second, applicants respectfully submit that Takehana also does not provide for the weights as set forth in parent claims 1, 2 and 13. The current rejection cites to the "knurls 251" of Takehana as corresponding to the weight(s) set forth in the claims. However, the knurls 251 are not equivalent structure.

Takehana describes the knurls as follows:

"Filmy knurls 242, for use as partitioning members for dividing the four lines of SMA coil 227, protrude from the inner surface of passage 240a. ... Thus, the space between sheathing tube 240 and protecting tube 234 is divided into a plurality of chambers by means of knurls 242, and the individual lines of SMA coils 227 are passed through the chambers."

Column 22, lines 34 to 43.

Therefore, "knurls" of Takehana are not used as weigh(s) and do not have an equivalent structure. Further, claims 1, 2 and 13 now recite a circular weight, that is, formed in a ring-shape, while "knurls 251" of Takehana are shaped into thin plates as shown in Fig. 63.

Moreover, in column 22, line 34, they are described as "filmy" knurls. If such filmy knurls act as weigh as the rejection asserts, they must have rigidity. However, referring to the description at column 22, lines 36 to 39, reveals that the "knurls 251" prevent the tube in Fig. 59 from bending. As such, they are not equivalent to the circular weights as set forth in the claimed invention.

Based on the above, applicants respectfully submit that Takehana does not provide for a working channel tube nor the weights as set forth in parent claims 1, 2 and 13. Wherefore, applicants respectfully submit that the claims, as well as their respective dependent claims, are not anticipated by Takehana under 35 U.S.C. §102.

**Applicants' Response to the Claim Rejections under 35 U.S.C. §103(a)**

**Claims 3, 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takehana as applied to claims 2 and 13 above, in view of McCoy (US 5114402).**

In response thereto, applicants respectfully submit that by addressing the rejection of parent claims 2 and 13 as detailed above, likewise the rejections of claims 3, 14 and 24 are addressed by nature of their dependency.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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Enclosure: Replacement Sheet (Figs. 21 and 22)